

CLAIMS

What is claimed is:

1. A low current oscillator circuit, comprising:
  - 5 a comparator for driving an output signal;
  - a first capacitor chain coupled to the comparator and for setting a first input voltage of the comparator; and
  - 10 a second capacitor chain coupled to the comparator and for setting a second input voltage of the comparator, wherein the first capacitor chain and the second capacitor chain determine a first voltage level and a second voltage level of oscillation of the comparator free of DC current flow.
2. The low current oscillator circuit of claim 1, further  
15 comprising:
  - 15 a switch circuit coupled to the comparator and for initiating an oscillation in the comparator.
3. The low current oscillator circuit of claim 2, further  
20 comprising:
  - 20 a feedback circuit coupled to an output of the comparator, the feedback circuit also coupled to the switch circuit for driving the switch circuit.
- 25 4. The low current oscillator circuit of claim 2, further comprising:
  - 25 a capacitor included in the switch circuit;
  - a current source coupled to capacitor and for charging the capacitor to the high voltage; and

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a switch coupled to the capacitor for discharging the capacitor to the low voltage.

5. The low current oscillator circuit of claim 1, further comprising:

a first capacitor and a second capacitor included in the first capacitor chain; and

a third capacitor and a fourth capacitor included in the second capacitor chain, wherein a node between the first capacitor and the second capacitor determines the first voltage level of oscillation and a node between the third capacitor and the fourth capacitor determines the second voltage level of oscillation.

6. An integrated circuit system including a low current oscillator circuit, comprising:

a comparator for driving an output signal;

a first capacitor chain coupled to the comparator and for setting a first input voltage of the comparator;

20 a second capacitor chain coupled to the comparator and for setting a second input voltage of the comparator, wherein the first capacitor chain and the second capacitor chain determine a first voltage level and a second voltage level of oscillation of the comparator free of DC current flow; and

25 an output signal line coupled to an output of the comparator for providing an oscillation signal to external circuit elements of the integrated circuit system.

7. The integrated circuit system of claim 6, further comprising:

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a switch circuit coupled to the comparator and for initiating an oscillation in the comparator.

8. The integrated circuit system of claim 7, further comprising:  
5        a feedback circuit coupled to an output of the comparator, the feedback circuit also coupled to the switch circuit for driving the switch circuit.

9. The integrated circuit system of claim 7, further comprising:  
10      a capacitor included in the switch circuit;  
            a current source coupled to capacitor and for charging the capacitor to the high voltage; and  
            a switch coupled to the capacitor for discharging the capacitor to the low voltage.  
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10. The integrated circuit system of claim 6, further comprising:  
            a first capacitor and a second capacitor included in the first capacitor chain; and  
            a third capacitor and a fourth capacitor included in the second capacitor chain, wherein a node between the first capacitor and the second capacitor determines the first voltage level of oscillation and a node between the third capacitor and the fourth capacitor determines the second voltage level of oscillation.  
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- 25        11. A low current oscillator circuit, comprising:  
            means for driving an output signal using a comparator;  
            means for setting a first input voltage of the comparator using a first capacitor chain coupled to the comparator; and

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means for setting a second input voltage of the comparator using  
a second capacitor chain coupled to the comparator, wherein the first  
capacitor chain and the second capacitor chain determine a first  
voltage level and a second voltage level of oscillation of the comparator  
5 free of DC current flow.

12. The low current oscillator circuit of claim 11, further  
comprising:

means for initiating an oscillation in the comparator using a  
10 switch circuit coupled to the comparator.

13. The low current oscillator circuit of claim 12, further  
comprising:

means for driving the switch circuit using a feedback circuit  
15 coupled to an output of the comparator, the feedback circuit also  
coupled to the switch circuit.

14. The low current oscillator circuit of claim 12, further  
comprising:

20 a capacitor included in the switch circuit;  
means for charging the capacitor to the high voltage using a  
current source coupled to capacitor; and  
means for discharging the capacitor to the low voltage using a  
switch coupled to the capacitor.

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15. The low current oscillator circuit of claim 11, further  
comprising:

a first capacitor and a second capacitor included in the first  
capacitor chain; and

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a third capacitor and a fourth capacitor included in the second capacitor chain, wherein a node between the first capacitor and the second capacitor determines the first voltage level of oscillation and a node between the third capacitor and the fourth capacitor determines  
5 the second voltage level of oscillation.

16. The low current oscillator circuit of claim 15, wherein a first ratio of the first capacitor and the second capacitor determines the first voltage level and a second ratio of the third capacitor and the fourth  
10 capacitor determines the second voltage level.

17. The low current oscillator of claim 11, further comprising:  
means for determining a duty cycle of an oscillation in the  
comparator using a switch circuit coupled to the comparator.